

**Notice of Allowability**

Application No.

10/627,607

Examiner

Juan C. Ochoa

Applicant(s)

ONODERA ET AL.

Art Unit

2123

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 10/23/07.
2. ☒ The allowed claim(s) is/are 1-5.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some\* c) ☐ None of the:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

### **DETAILED ACTION**

1. The amendment filed 10/23/07 has been received and considered. Claims 1–5 are presented for examination. Claim 6 is cancelled by Examiner's Amendment.

### **Examiner's Amendment**

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.
3. Authorization for this examiner's amendment was given in a telephone interview with Eduardo Garcia-Otero on January 4th 2008.
4. The application has been amended as follows:
5. Claim 1 line 9, immediately after the term "thickness", the following has been inserted -- size --.
6. Claim 6 has been canceled to circumvent 112 issues.

### ***Allowable Subject Matter***

7. Claims 1–5 are allowed over prior art of record.
8. The following is a statement of reasons for the indication of allowable subject matter:
9. While Mitsuhiro Tonooka, U.S. Patent 7,002,575, discloses an analytical shell-model producing apparatus (see "shell-model producing apparatus" as "design supporting apparatus" in col. 3, lines 34–37 and Fig. 1, item No. 10),

Kawaguchi et al., U.S. Patent 7,038,700, discloses a side rib attribute acknowledging means for acknowledging a rib surface. (See col. 8, lines 53–58, and Fig. 9A), and Mobley et al., An Object Oriented Approach to Geometry Defeaturing for Finite Element Meshing, discloses a top/bottom rib attribute emphatic displaying means for displaying the top side surface, the bottom side surface and the rib surface, which are acknowledged by said top/bottom side rib attribute acknowledging means, with making emphasis thereon (see Fig. 11 in page 560 and Fig. 13 in page 561).

10. None of these references taken either alone or in combination disclose an analytical shell-model apparatus, in which Examiner interprets the "inputting means" as the "input/output device 101" of Fig. 1 (see claimed invention's page 7, line 8 and page 9, lines 4–6), and thus the "inputting means" is hardware, for converting a three-dimensional configuration model into an analytical shell-model specifically including: claim 1 "a pair-surfaces acknowledging means for acknowledging two (2) surfaces as pair-surfaces data, being equal or less than the reference-plate thickness size, which is inputted by said reference-plate thickness inputting means, in face-to-face distance between two (2) arbitrary surfaces constructing the configuration model" and "a top-bottom side rib attributes acknowledging means for classifying the pair-surfaces data registered by said pair-surfaces acknowledging means into a top-side surface, a bottom-side surface and a rib surface, through producing a neighboring graph of connecting nodes themselves to the neighboring surfaces by edges, with presuming the surfaces to be nodes to the configuration model, and searching a loop including two (2) or more of the edges of a pair attribute, while determining a non-rib surface when the

number of nodes within the loop is equal or less than four (4), and thereby registering the attributes as top-side surface data, bottom-side surface data, and rib surface data, respectively",

and claim 3 "a pair-surfaces acknowledging means for acknowledging two (2) surfaces, being equal or less than the reference-plate thickness size, which is inputted by said reference-plate thickness inputting means, in face-to-face distance between two (2) arbitrary surfaces constructing the configuration model" and "a top/bottom side rib attribute acknowledging means for acknowledging the two (2) surfaces acknowledged by said pair-surfaces acknowledging means to be one of a top side surface, a bottom side surface, and a rib surface",

in combination with the remaining elements and features of the claimed invention. Also, there is no motivation to combine these references to meet these limitations. It is for these reasons that applicant's invention defines over the prior art of record.

### ***Response to Arguments***

11. Applicant's arguments filed 10/23/07 have been fully considered and they are persuasive.

12. Regarding the claim objections, the amendment corrected all deficiencies and the objections are withdrawn.

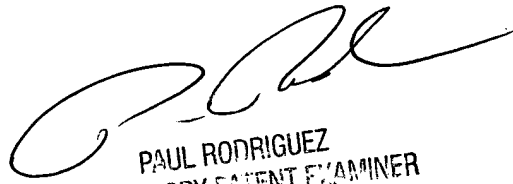
13. Regarding the rejections under 112, the amendment corrected all deficiencies and the rejections are withdrawn.

### ***Conclusion***

14. Examiner would like to point out that any reference to specific figures, columns and lines should not be considered limiting in any way, the entire reference is considered to provide disclosure relating to the claimed invention.
15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Juan C. Ochoa whose telephone number is (571) 272-2625. The examiner can normally be reached on 7:30AM - 4:00 PM.
16. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Rodriguez can be reached on (571) 272-3753. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.
17. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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